

**Applicant:** Valentino Campagnolo  
**Application No.:** 10/663,458

**Amendments to Drawings:**

The attached sheets of drawings includes changes to Figures 1 and 3. These sheets are amended to remove reference numbers 27, 30, and 41 in Figure 1. A leadline from reference number 43 has also been removed from Figure 1. Leadlines and reference numbers 37 and 44 have been added to Figure 1. In Figure 3, reference number 33 is removed.

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**REMARKS/ARGUMENTS**

This Amendment amends claims, 1, 11, 17, 18, 19, and 20, and adds claims 21-28. Claims 1-28 are pending. No new matter is added in this amendment.

**Priority**

This application claims priority to U.S. Application Serial No. 09/716,236, now U.S. Patent No. 6,623,389 which in turn claims priority from Italian Application No. T099A001023 filed November 21, 2000. A certified copy of the priority document can be found in the U.S. Application Serial No. 09/716,236.

**Objections to the Specification**

The Action objected to the use of “said” in the Detailed Description. Several instances of “said” are amended herein to read “the,” although “said” is a common and non-legal word often used in place of “the.” The Amendment also amends the Specification for minor changes, including updating priority (paragraph [0003]), giving more detail regarding a resistive transducer (paragraph [0054]), and a more detailed explanation of Figure 6 (paragraph [0046]).

**Objections to the Drawings**

The Action objected to several features that it identified as existing in claims 20-22 but not in the drawings, including a “reducer,” and “means for counting the number of turns.” Action page 2. The originally filed application, however, has only 20 claims pending, and these particular elements are not listed in any pending claim. Withdrawal of this rejection, or at least clarification thereof, is requested.

The Action objected to reference number 40 as needing to show a control unit, which it does, or at least its location near the crankset, as described in Paragraph [0020].

Paragraph [0046] was amended to give a more detailed explanation of Figure 6, which shows at least one possible arrangement for an optical or magnetic transducer.

The Amendment revises Figures 1 and 3 in response to the objection in paragraph 3 of the Action (see above discussion under the Amendments to the Drawings heading).

**Claim Rejections - 35 USC § 112**

The Action rejected claim 2 due to lack of clarity about what a “resistive transducer” defines. A resistive transducer is described in the enclosed web page, thus: “In a resistive transducer, the resistance changes in response to the value of

the physical quantity being measured.”<sup>1</sup> This brief explanation is incorporated into the specification paragraph [0054] as well.

The Action rejected claims 18-20 as indefinite and unclear for not setting forth any steps involved in the method. The Amendment changes these claims to further specify the type of transducer recited in claim 18.

### **Claim Rejections - 35 USC § 102, 103**

The Action rejected all of the claims as anticipated or obvious in view of U.S. Patent No. 5,480,386 to Campagnolo (the present inventor), and Campagnolo combined with DE 19848052. Neither of these references show what is now claimed.

All of the claims, as amended, either recite an absolute transducer for detecting the absolute position of a body, or a transducer that outputs a signal to turn off the actuator. Neither of these elements are taught or suggested in the prior art. The advantage of an absolute transducer is that a power interrupt does affect it, that is, the transducer does not have to be recalibrated when power to the transducer is interrupted. Neither Campagnolo nor DE 19848052 teach or suggest absolute transducer. Regarding transducer that outputs the shut-off signal, there is no “shut-off” built in to the prior art systems, and since battery conservation is critical in powered cycling systems, a shut-off is an important advantage over the

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<sup>1</sup> The website <http://www.me.polyu.edu.hk/subject/me309/notes/chapt4b.pdf> explains the resistive transducer, and a

prior art. Thus, Campagnolo and DE 19848052 do not teach or suggest at least the following elements for each claim.

Claim 1: “an absolute transducer mounted on the device for detecting an absolute position of the second body.”

Claim 11: “an absolute transducer mounted on the device that detects an absolute position of the second body.”

Claim 17: “attaching an absolute transducer to the device for detecting an absolute position of the second body.”

Claim 21: “a transducer that detects at least two positions of the second body relative to a position of the first body, wherein when one of said positions corresponds to position where the chain is engaged with the second toothed crown, the transducer outputs a signal that selectively disables the electric actuator.”

Claim 23: “a transducer that detects multiple positions of one of the first or second bodies relative to the other of the first or second bodies, wherein when one of said positions corresponds to a position where the chain is engaged with the second toothed crown, the transducer outputs a signal that selectively disables the electric actuator.”

Claim 25: “an absolute transducer that detects at least two positions of the second body relative to a position of the first body.”

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Claim 26: “a transducer mounted on the device for detecting a position of the second body relative to a position of the first body, the transducer outputting a signal that selectively disables the electric actuator.”

Claim 27: “a transducer mounted on the device that detects a relative position of the second body with respect to the first body, wherein the transducer outputs a signal that selectively disables the electric actuator.”

Claim 28: “attaching a transducer to the device for detecting a position of the second body relative to a position of the first body, wherein the transducer outputs a signal that selectively disables the electric actuator.”

### **Claim Rejections - Double Patenting**

The Action rejected all of the pending claims under the judicially-created doctrine of double patenting. In response, the undersigned submits the enclosed Terminal Disclaimer, which should overcome this rejection.

### **Conclusion**

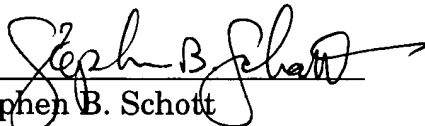
For the above reasons provided above, it is respectfully submitted that pending claims 1-28 are in condition for allowance. Accordingly, reconsideration and allowance of pending claims 1-28 are respectfully requested.

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If the Examiner believes that a personal or telephonic interview would advance the prosecution of this application, the Examiner is respectfully requested to contact the undersigned at 215-568-6400.

Respectfully submitted,

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Enclosures